### ORIGINAL RECEIVED

### WILEY. REIN & FIELDING

1776 K STREET, N. W. WASHINGTON, D. C. 20008 (202) 429-7000

January 22, 1996

FEDERAL COMMUNICATIONS COMMISSION OFFICE OF SECRETARY

FACSIMILE (202) 429-7049

WRITER'S DIRECT DIAL NUMBER

(202) 828-4901

William F. Caton Secretary Federal Communications Commission 1919 M Street, N.W. Washington, D.C. 20554

DOCKET FILE COPY ORIGINAL

Reply Comments of Viacom Inc. Re:

In Re Advanced Television Systems (MM Docket No. 87-268)

Dear Mr. Caton:

By its undersigned attorney, Viacom Inc. ("Viacom") hereby submits its Reply Comments for filing in the above-captioned proceeding. In accordance with Section 1.419 of the Commission's rules, this submission consists of the original document and four copies.

Please date-stamp the enclosed duplicate upon receipt and return it via the messenger for our files.

Should any questions arise concerning this submission, kindly contact the undersigned.

Respectfully submitted

Rosemary C. Harold

Enclosures

No. of Copies rec'd List ABCDE

ORIGINAL RECEIVED

# Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

ON CARY 2 2 1996
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact Upon the	)	MM Docket No. 87-268
Existing Television Broadcast	)	
Service	)	

#### REPLY COMMENTS OF VIACOM INC.

Lawrence W. Secrest, III
Peter D. Ross
Rosemary C. Harold
of
WILEY, REIN & FIELDING
1776 K Street, N.W.
Washington, DC. 20006
(202) 429-7000

Its Counsel

### **TABLE OF CONTENTS**

		<u>ra</u>	<u>ge</u>
SUMN	MARY		iv
I.	AND.	OM SUPPORTS OPEN STANDARDS FOR SET-TOP BOXES ATV RECEIVERS TO ENSURE THAT CONSUMERS HAVE IER-FREE ACCESS TO DIGITAL PROGRAMMING	4
	A.	Closed Technical Standards And Equipment Designs Could Deny Consumers Reasonable Access To ATV Programming	7
	В.	Set-Top Boxes Used To Receive Signals From Various Multichannel Service Providers And ATV Receiver Designs Should Not Block Consumer Access To ATV	10
	C.	Any Proprietary Intellectual Property Embedded In ATV Receivers And Set-Top Boxes Must Be Fairly Licensed	12
	D.	The Commission Should Safeguard Against Other Anticompetitive Practices Involving ATV Set-Top Boxes	13
II.	ALLO AFFO	AIN FCC DETERMINATIONS ARE CRITICAL TO OWING BROADCASTERS A GENUINE OPPORTUNITY TO ORD ALL CONSUMERS THE FULL BENEFITS OF ANCED TELEVISION	15
	A. Viacom Supports The Emerging Consensus On Many Of The Issues Raised By The Transition To Digital Television		
		1. Speedy Adoption Of The Grand Alliance/ATSC Standard Will Make It Possible For All U.S. Consumers To Enjoy A Full Array Of Digital Services	15

2.	Eligil The	The Record Demonstrates That Reserving Initial Eligibility For Existing Broadcasters Will Promote The Speediest, Most Universal Delivery Of Digital Broadcasting Services To The American Public				
	a.	The Record Warrants Assigning An ATV Transition Channel To Current Broadcast Permittees	19			
	b.	Nothing In The Record Justifies Abandonment Of The Commission's Longstanding ATV Implementation Framework For The Sake Of Generating Immediate Spectrum Auction Revenue	20			
3.	Full Rease Broad	Nothing In The Record Refutes The Fact That A Full 6 MHz Channel Allocation, Subject To Reasonable Conditions, Is Necessary For Broadcasters To Deliver All ATV Services Made Possible By The Grand Alliance/ATSC Standard				
	a.	The Record Provides Support for Requiring An ATV Licensee To Provide At Least One Free Digital Broadcast Program Service To The Viewing Public At All Times The Licensee Operates Its ATV Channel	23			
	b.	The Record Provides Support For Establishing A Minimum HDTV Transmission Requirement	23			
	c.	The Record Provides Support For An Initial Simulcasting Requirement To Facilitate The Transition To ATV	25			
4.	That	wing In The Record Warrants Any Limitation Would Deny Consumers The Full Benefits of Flexibility	27			

	5.	The Record Demonstrates A Compelling Need To Structure Transition Deadlines In Accordance With Consumer Acceptance Of ATV Technology	29
	6.	The Complex Questions Raised By Mandatory Carriage In A Digital Environment Warrant Caution But Not Delay In FCC Implementation of ATV	31
В.	-	ng On Contiguous Blocks Of Spectrum Would Offer The An Efficient Implementation Plan For ATV Broadcasting	33
	1.	A UHF Allocation Plan Would Accommodate A Contiguous ATV Spectrum Block After The Transition To ATV	34
	2.	Spectrum Allocations During The Transition To ATV Should Minimize The Need For Multiple Channel Assignment Changes	35
CONCLUSION	ON		36

Page

#### **SUMMARY**

As both a content provider and a broadcaster, Viacom agrees with the emerging consensus that the Commission should move quickly to implement advanced television ("ATV"), including high definition television ("HDTV"), using the technological standards developed by the Digital HDTV Grand Alliance. In so doing, however, it is critical that the FCC adopt ATV technology rules that will provide consumers ready access to all digital television program sources — and offer content providers unencumbered access to consumers. Specifically, Viacom urges the Commission to act now to deter the erection of technological "roadblocks" that could exclude programmers from ATV transmission systems, or unfairly favor one programmer or service provider over another.

Technological roadblocks could thwart consumer choice, and stated FCC policy goals, in two ways:

- By frustrating the ability of consumers to select from among all available ATV video services offered by local broadcasters; or
- By hindering consumer access to an even wider array of choices among program services offered over competing multichannel video delivery systems.

In either event, consumers would be forced to buy or lease multiple set-top boxes or decryption devices to receive ATV -- which will undermine the success of, and slow the transition to, digital television.

To ensure that consumers obtain the widest choice of ATV services possible, Viacom recommends that the Commission:

- Require that any broadcaster supplying subscription-type television service on its ATV channel employ a conditional access interface standard developed by an industry group such as the Advanced Television Systems Committee ("ATSC").
- Provide developers and creators of conditional access or other such technology a fair return for their efforts not through a stranglehold over consumers, but rather through reasonable and nondiscriminatory licensing fees and other terms.
- Ensure that the equipment of cable and other alternative delivery providers accommodates ATV signals, including HDTV, and that digital receivers be able to accommodate the digital output of both over-the-air ATSC signals and cable systems.
- Establish a general safeguard against anticompetitive practices with respect to the design and functioning of the set-top box (e.g., precluding the inclusion of off/on switches that automatically default to a certain favored channel).

Certain other FCC actions are also necessary to ensure that consumer choice ultimately drives the evolution of digital television and digital programming. Of course, critical to encouraging broadcaster development of ATV is the promise of new or enhanced sources of revenue. Without the limited safeguards highlighted below, however, digital TV's rewards will become a mirage that few broadcasters can afford to chase. To that end, Viacom believes the record now before the FCC justifies:

- Adopting the highly flexible and innovative Grand Alliance/ATSC standard for terrestrial digital television, providing for both HDTV and standard definition television ("SDTV") modes.
- Limiting initial eligibility for ATV licenses to existing broadcasters, including current holders of broadcast construction permits.
- Conducting any auction of available broadcast spectrum only after old NTSC channels are recovered and ATV channels are "repacked" closely together on the broadcast band so as to leave open a nationwide,

- contiguous band of spectrum likely to realize higher auction prices than open allotments dispersed among broadcast channels.
- Providing licensees with the full 6 MHz ATV channel necessary for broadcasters to transmit HDTV programming to their audiences, while at the same time requiring ATV licensees to:
  - -- Provide at least one free digital video transmission during all ATV operating hours;
  - -- Broadcast a minimum five hours of HDTV transmissions per week; and
  - -- Simulcast the station's NTSC programming on one of its ATV signals during the phase-in of HDTV.
- Authorizing ATV licensees to explore the full flexibility of the Grand Alliance/ATSC standard for providing a broad range of services to the public -- including multichannel SDTV and subscription and data services
   so long as those uses do not adversely affect the broadcaster's free video transmissions.
- Structuring an end to the transition period that encourages broadcasters to move quickly to ATV but does not take effect until the FCC has determined that free broadcasting has been firmly established in the digital environment.
- Ensuring that the complex issues raised by mandatory carriage of digital video signals do not delay the prompt implementation of ATV -- and that any expansion of current must-carry requirements:
  - -- Will not undermine a cable operator's ability to carry existing cable program services or to add new cable services; and
  - -- Will not subordinate the carriage of at least one signal of each qualified local broadcaster in a market to the carriage of additional signals of other broadcasters in that same market.
- Limiting ATV frequency allotments to a contiguous band of UHF channels.

### RECEIVED

# Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

_	מבנו - "
FEDERAL	COMMUNICATIONS COMMISSION OFFICE OF SECRETARY
	COMMUNICATIONS CO.
	OFFICE OF SECRETARY
	THE OF SELECTARY

In the Matter of	)		OF SECRETARY
Advanced Television Systems and Their Impact Upon the	) )	MM Docket No. 87-268	
Existing Television Broadcast Service	)		

#### REPLY COMMENTS OF VIACOM INC.

Viacom Inc. ("Viacom") hereby submits its reply to comments filed in connection with the Commission's Fourth Further Notice of Proposed Rulemaking ("Fourth Further Notice") in the above-captioned proceeding.<sup>1</sup> As both a broadcaster and content provider,<sup>2</sup> Viacom understands that terrestrial broadcasters must undertake

(continued...)

Fourth Further Notice of Proposed Rulemaking and Third Notice of Inquiry, 10 FCC Rcd. 10 (1995) ("NPRM").

Viacom, a diversified entertainment and communications company, has various interests that would be directly affected by the parameters established by the Commission in this and related proceedings to govern the provision of ATV services. Viacom, through its subsidiary Paramount Stations Group, operates 12 television stations, which are located in Boston, MA; Miami, FL; Houston and Dallas, TX; Washington, D.C.; Detroit, MI; Philadelphia, PA; Atlanta, GA; St. Louis, MO; Albany and Rochester, NY; and Hartford, CT. Further, Viacom is engaged in a number of other businesses, including radio broadcasting; the production and licensing of syndicated and network television programming and interactive media; the production, distribution and exhibition of theatrical motion pictures; the retail distribution of music and video cassettes; the ownership and operation of amusement parks; the publication and distribution of education, business, and trade books; the production and distribution of educational technology, television programming, and interactive media; and the licensing and merchandising of its trademarks.

the transition to advanced television ("ATV") in order for the nation's free broadcasting system to survive and flourish in an era of digital communications. The record in this proceeding demonstrates that the FCC has a crucial role in securing swift deployment of broadcast ATV. Viacom therefore supports the prompt completion of Commission action enabling broadcasters to enter and participate effectively in the digital environment -- while ensuring consumers ready access to the full array of services made possible through digital TV.

Broadcast entry into the digital video arena requires government action to settle certain limited, yet critical matters. FCC adoption of the standard developed by the Advanced Television Systems Committee ("ATSC") and the Digital HDTV Grand Alliance is the foundation upon which feasible ATV implementation depends. Upon this foundation, the Commission must build its regulatory framework in a manner that

<sup>&</sup>lt;sup>2</sup>(...continued)

Viacom's programming ventures are particularly extensive. The company's MTV Networks division ("MTVN") owns the advertiser-supported program services MTV: Music Television, VH1, and Nickelodeon (comprised of the Nickelodeon and Nick at Nite programming blocks). Viacom's wholly-owned subsidiary Showtime Networks Inc. ("SNI") owns the premium program services Showtime, The Movie Channel, and FLIX, and Viacom's wholly-owned subsidiary MTV Latino Inc. owns the advertiser-supported program service MTV Latino, which is distributed domestically and to Latin American territories. In addition, Viacom (through its wholly-owned subsidiaries, or through affiliated entities) holds partnership interests in several other advertiser-supported program services, including Comedy Central, USA Network, Sci-Fi Channel, the All News Channel, and the Sundance Channel. Viacom also owns Showtime Satellite Networks Inc., which licenses SNI, MTVN, and a variety of thirdparty program services to owners of home television receive-only earth stations nationwide; and, through Simon & Schuster, the Educational Management Group, Inc., which develops and distributes to subscriber schools customized instructional materials and interactive television services.

will foster fair exposure in the marketplace for all forms of ATV service, including both high definition television ("HDTV") and standard definition television ("SDTV"). In particular, the economic incentive for broadcaster deployment of such ATV services will be threatened if the FCC fails to prevent technological "roadblocks" that could obstruct consumer access to digital video program services. Viacom therefore joins other commenters in urging the Commission to act now to ensure open standards for the set-top boxes needed for ATV reception and display of subscription and ancillary services by today's non-digital television sets, as well as for the next generation of digital TV receivers. Failure to adopt such safeguards will undermine public acceptance of ATV -- and allow certain distributors or technology providers to become the "gatekeepers" of ATV deployment.

Viacom also briefly addresses other policy matters central to ATV implementation, including initial eligibility for licenses, the scope of permissible ATV services, the transition schedule, and ATV channel allocation issues. As described below, Viacom concurs with its fellow broadcasters that both consumers and the industry will benefit from an orderly, market-driven transition to ATV that provides universal, free NTSC and ATV television services (including at least a minimum number of hours of HDTV broadcasts) throughout the transition while allowing broadcasters to make reasonable, flexible use of their ATV channels.

<sup>&</sup>lt;sup>3</sup> See Testimony of Edward D. Horowitz, Senior Vice President of Viacom Inc., Commission En Banc Digital Television Hearing, December 12, 1995.

# I. VIACOM SUPPORTS OPEN STANDARDS FOR SET-TOP BOXES AND ATV RECEIVERS TO ENSURE THAT CONSUMERS HAVE BARRIER-FREE ACCESS TO DIGITAL PROGRAMMING

The Commission must act now to ensure that all Americans are afforded the opportunity to enjoy the quality and diversity of programming and consumer services that digital technology makes possible -- including, first and foremost, the free digital video transmission services to be offered by local broadcasters. Viacom is committed to taking full advantage of the opportunities digital technology affords it to provide all forms of its content to all sources of distribution and delivery media. Prompt FCC action is necessary, however, to prevent roadblocks from interfering with the roll-out of ATV service.

Implementation of ATV based on the publicly available Grand Alliance specifications is, standing alone, no guarantee that consumers will enjoy unimpeded access to digital services -- or that digital content providers will enjoy unimpeded access to consumers. Viacom agrees with the vast majority of commenters who support rapid FCC adoption of the ATSC Digital Television Standard -- the embodiment of the Grand Alliance system -- as the nation's terrestrial ATV broadcasting standard. As a global provider of entertainment and information, Viacom has a keen interest in providing consumers fair access to all its products, including video programming from Nickelodeon, MTV, VH1, Showtime, Paramount, and other divisions of the company, as well as video games and new interactive services being created by Viacom New Media, Simon & Schuster, and other Viacom companies. But

anticompetitive roadblocks -- in the form of multiple, incompatible decoding devices, for example -- could destroy public access to those services.

Like many other commenters, Viacom is deeply concerned about the potential for ATV reception devices (either set-top boxes or equivalent built-in components of new ATV television receivers) to be designed and deployed in a manner that could prevent consumers from obtaining programming from one or more competing providers.<sup>4</sup> As CBS has explained, the general issue of receiver interoperability "is of special concern for terrestrial broadcasters and their over-the-air audiences because these broadcast audiences will be dependent for the indefinite future on the built-in features of integrated receivers."<sup>5</sup>

The coalition of broadcasters led by the Association for Maximum Service

Television ("MSTV") has identified certain related concerns, including a need to ensure
that ATV sets and set-top boxes are able to receive "all broadcast signals that are

See, e.g., Comments of Association for Maximum Service Television, MM Docket No. 87-268, at 36-39 (filed Nov. 20, 1995) ("MSTV Comments"); Comments of Association of America's Public Television Stations and the Public Broadcasting Service, MM Docket No. 87-268, at 35 (filed Nov. 20, 1995) ("APTS/PBS Comments"); Comments of National Association of Broadcasters, MM Docket No. 87-268, at 8-10 (filed Nov. 20, 1995) ("NAB Comments"); Comments of the Cable Telecommunications Association, MM Docket No. 87-268, at 2-3 (filed Nov. 20, 1995) ("CATA Comments"); Comments of the Electronic Industries Association and the Advanced Television Committee, MM Docket No. 87-268, at 11-13 (filed Nov. 20, 1995) ("EIA & ATV Committee Comments"). Comments of the Association of Independent Television Stations, Inc., MM Docket 87-268, at 20-21 (filed Nov. 20, 1995) ("INTV Comments").

<sup>&</sup>lt;sup>5</sup> Comments of CBS Inc., MM Docket No. 87-268, at 8 n.7 (filed Nov. 20, 1995) ("CBS Comments").

included in the ATV standard."<sup>6</sup> In addition, there is the wider need for safeguards to ensure against the possibility that set-top boxes would "cause unnecessary and anti-competitive bottlenecks in the distribution of ATV programming" because they would deliver "only certain digital transmission protocols."<sup>7</sup>

Viacom believes that the FCC can avoid technological roadblocks by prohibiting anticompetitive use of the set-top box and, as detailed below, ensuring that: (1) standards for set-top boxes (and equivalent components of ATV receivers) be openly available; (2) set-top boxes and digital receivers be capable of accepting and connecting with multiple conditional access systems; and (3) any proprietary intellectual property embedded in a set-top box (rather than in a removable "smart card") be licensed on reasonable and non-discriminatory terms.

Digital technology could be developed to deny consumers reasonable access to sources of ATV programming in two ways. First, the set-top boxes used to receive ATV broadcasts for display on NTSC sets could be used by one set of broadcasters to exclude another and, second, the set-top boxes used to receive signals from one service provider (e.g., cable) could be used to block the signals of another service provider (e.g., over-the-air ATV broadcasting).

<sup>&</sup>lt;sup>6</sup> MSTV Comments at 37.

<sup>&</sup>lt;sup>7</sup> <u>Id.</u> at 38.

<sup>&</sup>lt;sup>8</sup> Such an open standards requirement should not -- indeed, must not -- compromise either signal security or intellectual property rights.

# A. Closed Technical Standards And Equipment Designs Could Deny Consumers Reasonable Access To ATV Programming

As several commenters have noted, 9 set-top boxes almost certainly will be developed to receive ATV broadcasts for conversion to analog signals and display on NTSC receivers. 10 These converter boxes will play a key role in the transition to ATV and, both during and after the transition, will be used to preserve viewers' investment in NTSC receivers. Indeed, instead of replacing every set that they own, consumers might well wish to purchase a comparatively inexpensive converter box so they can continue to use at least some of their existing analog sets. These converter boxes may be particularly important to Americans who are unable to afford a new digital television set to receive ATV broadcasts when analog NTSC transmissions cease. 11

See, e.g., Comments of Digital HDTV Grand Alliance, MM Docket No. 87-268, at 17 (filed Nov. 20, 1995) ("HDTV Grand Alliance Comments"); Comments of Golden Orange Broadcasting Co., Inc., MM Docket No. 87-268, at 3-4 (filed Nov. 20, 1995) ("Golden Orange Broadcasting Comments"); Comments of Hitachi America, LTD., MM Docket No. 87-268, at 4 (filed Nov. 20, 1995) ("Hitachi Comments"); EIA & ATV Committee Comments at 14-15.

<sup>&</sup>lt;sup>10</sup> Incorporating technology built according to the FCC's ATV broadcasting standard, these boxes will receive ATV transmissions from an antenna just like a digital television receiver would and then convert the signal into the format of the Commission's NTSC analog transmission standard as input to the antenna terminals of an NTSC TV set.

Of course, as consumers buy new ATV sets, ATV components providing for the reception of analog signals will be built into those sets.

Yet this set-top box could be turned into a roadblock. For example, in a hypothetical TV market served by six television stations, three of the stations might decide to deliver subscription services using a single proprietary conditional access coding scheme. Because this conditional access scheme would work with only one particular converter box design, local viewers employing this converter box would be unable to receive subscription services from the three other broadcasters using a different conditional access system without purchasing or leasing one or more additional converter boxes -- hardly a consumer- or competitor-friendly prospect. While free ATV signals broadcast in the clear will always be available to local viewers, the three strongest stations -- through their conditional access coding arrangement -- would have effectively positioned themselves as gatekeepers between local viewers and those subscription ATV video transmissions offered to consumers by the excluded broadcasters.

These roadblocks would, of course, hinder access in two directions. From the consumer's perspective, preclusive use of a set-top box could artificially restrict access

Such a roadblock would not necessarily require coordination among multiple stations, however. For instance, a single broadcaster or broadcast network could act on its own against other stations, or networks affiliated with other stations, in a market by distributing free boxes on a "loss leader" basis to entrench its proprietary coding in the market.

The clear public interest in universal access to the nation's broadcasting system throughout and after the transition to the digital era warrants particular Commission action here, beyond any remedy that might or might not be afforded under the general antitrust laws.

to the full array of ATV video transmission services available in the consumer's local television market. From the perspective of an excluded content provider, each anticompetitive box represents one less potential consumer of the provider's product. And once a sufficient number of such boxes were deployed in a given market, the result would be a bottleneck that could effectively deny excluded broadcasters viable access to local consumers.

The solution for this problem is for the Commission to require that, before using ATV spectrum for any subscription or pay-per-view television purpose, a broadcaster must subscribe to a common interface specification developed by a neutral industry group, such as the ATSC.<sup>14</sup> The common interface specification would result in a set-top box and equivalent ATV set component which allows one device to process all conditional access systems used by any broadcaster. In the hypothetical market described above, for example, the three broadcasters that decide to transmit pay television services would have to commit to a common interface specification or other appropriate mechanisms so that no one of them would be able to act as a gatekeeper between local viewers and subscription services offered by other broadcasters.

<sup>&</sup>lt;sup>14</sup> Viacom thus does not request or expect the FCC itself to formulate the specific conditional access and encryption standards.

B. Set-Top Boxes Used To Receive Signals From Various
Multichannel Service Providers And ATV Receiver Designs
Should Not Block Consumer Access To ATV Broadcast Signals

Many consumers, as the comments make clear, can be expected to obtain ATV service from a variety of service providers, including broadcast stations, cable systems, direct broadcast satellites ("DBS"), multichannel or local multipoint distribution service ("MMDS" or "LMDS"), and telephone company video systems. Each medium is likely to employ the signal modulation technique best suited for its particular transmission environment. Absent safeguards, set-top boxes for one delivery medium could effectively block signals from other transmission systems. This could make it difficult, if not impossible, for a consumer to obtain access to all programming choices available in its local television market, and competition among the various distribution media — especially that provided by more fledgling service providers — could be inhibited.

Because some two-thirds of U.S. households receive their television signals via non-broadcast means, ensuring a fair market test for ATV will require that the equipment put in place by alternative service providers be able to pass over-the-air ATV digital signals, including HDTV. In particular, at least during the transition period, any digital equipment deployed by alternative multichannel service providers should be able to accommodate ATV signals.

Viacom agrees with MSTV that consumers would best be served if one set-top box were available that would "receive (and descramble and decompress) cable signals"

and also "accommodate terrestrial broadcast ATV signals." Viacom believes that the Commission's call for open standards could go far toward encouraging marketplace development of such a box.

As a corollary, the FCC should require ATV and HDTV receivers both to accept digital broadcast signals aired using the ATSC standard and to be capable of accommodating the digital transmissions of cable and other alternative delivery providers. As indicated earlier, differences between broadcast and cable ATV technology may cause consumers to unnecessarily purchase or lease cable set-top boxes. Although the ATSC terrestrial transmission standard specifies a modulation technique known as "VSB," many cable systems are adopting or pursuing a different type of ATV modulation called "QAM." A digital television set with only a VSB demodulator would not be able to receive QAM-based cable signals and, similarly, a cable set-top box with a QAM demodulator would not be able to receive broadcast signals. Fortunately, the cost of including two demodulators in a digital set-top box or television set is relatively minimal because QAM and VSB demodulators can share much of the same circuitry. Thus, were all ATV receivers to incorporate both such

<sup>15</sup> MSTV Comments at 38.

<sup>&</sup>lt;sup>16</sup> In other respects, the specifications would be the same.

<sup>&</sup>lt;sup>17</sup> The FCC's Advisory Committee on Advanced Television Service estimated that a dual VSB/QAM demodulator would require a cost increase of only a few percent over the cost of the single-mode demodulator.

demodulators, consumers could be relieved of the need to purchase or lease a set-top box in order to receive all broadcast and cable signals not subject to conditional access.

#### C. Any Proprietary Intellectual Property Embedded In ATV Receivers And Set-Top Boxes Must Be Fairly Licensed

The Commission should ensure fair licensing of any proprietary intellectual property upon which the hardware and software components of digital set-top boxes and receivers are based. Without ready access to this intellectual property, incompatibilities among different set-top boxes and receivers almost surely will arise and, whether intended or not, create anticompetitive roadblocks. For instance, different standards for conditional access circuitry might be developed simply because one set-top box manufacturer refuses to license patents to others. Consumers could then be burdened with the expense of employing two boxes to receive all the ATV programming broadcast in one area. This hardship should be avoided simply by extending a policy the agency has already adopted, which requires that the technology selected for ATV broadcasting be predicated upon "the proponent's commitment to reasonable and nondiscriminatory licensing of relevant patents." Viacom believes that the current policy should apply equally to the standards used in set-top boxes designed to receive ATV signals.

<sup>&</sup>lt;sup>18</sup> Second Report and Order/Further Notice of Proposed Rulemaking, 7 FCC Rcd. 3340, 3358 (1992).

# D. The Commission Should Safeguard Against Other Anticompetitive Practices Involving ATV Set-Top Boxes

Beyond the risks posed by incompatible conditional access systems, the Commission should ensure that set-top box technology is not otherwise devised or deployed in a manner that undermines competition among programmers or service providers. As illustrated above, the set-top box is likely to play a key initial role in delivery of digital programming to consumers. Thus, the FCC must be watchful to guard against any anticompetitive manipulation of the device. For instance, the agency should not permit deployment of boxes which default to a specific channel when the power is turned on. This scheme easily could be used anticompetitively to favor a specific video service provider.

\* \* \* \* \*

In sum, the FCC should take the following steps:

- Require that any broadcaster supplying subscription-type television service on its ATV channel employ an open conditional access interface standard developed by an industry group such as the ATSC.
- Provide developers and creators of conditional access or other such technology a fair return for their efforts not through a stranglehold over consumers, but rather through reasonable and nondiscriminatory licensing fees and other terms.
- Require the equipment of cable and other alternative delivery providers to accommodate broadcast ATV signals, including HDTV, and that digital receivers be able to accommodate the digital output of both overthe-air ATSC signals and cable systems.

Establish a general safeguard against anticompetitive practices with respect to the design and functioning of the set-top box (e.g., precluding the inclusion of off/on switches that automatically default to a certain favored channel).

This approach would not introduce burdensome regulatory requirements. 19 but simply

Furthermore, a set-top ATV converter could be described alternatively as a "TV interface device" as defined in section 15.3(y) of the Commission's rules. See 47 C.F.R. § 15.3(y) (1994). The Commission has acknowledged, and currently exercises its authority to require, that TV interface devices comply with the All Channel Receiver Act. Section 15.117(a) of the Commission's rules states that TV interface devices "that incorporate the tuner portion of a TV broadcast receiver and that are equipped with an antenna or antenna terminals that can be used for the off-the-air reception of TV broadcast signals" must comply with many of the rules applicable to TV broadcast receivers, including the rule that a TV broadcast receiver must be capable of receiving all allocated television frequencies. See 47 U.S.C. § 15.117(b) (embodying the requirements of the All Channel Receiver Act). The cable consumer equipment compatibility provisions of the 1992 Cable Act provide the Commission (continued...)

<sup>&</sup>lt;sup>19</sup> Nothing in the record calls into question the Commission's authority to require open standards and pass-through capabilities for set-top boxes and the next generation of ATV receivers. As other commenters have noted, see, e.g., Comments of Texas Instruments, MM Docket No. 87-268, at 5 n.2 (filed Nov. 20, 1995) ("Texas Instruments Comments"), the legal foundation can be found in the All Channel Receiver Act of 1962, which authorizes the Commission to require that an "apparatus designed to receive television pictures broadcast simultaneously with sound be capable of adequately receiving all frequencies allocated by the Commission to television broadcasting." All-Channel Receiver Act of 1962, 47 U.S.C. § 303(s) (1982) ("Section 303(s)"). A set-top box used to receive and convert ATV broadcast television pictures falls within the plain-language definition of an "apparatus" under the statute because the box is designed to "receive" television pictures even as it retransmits the pictures to another device for display. The courts have recognized the Commission's broad authority to interpret the meaning of Section 303(s) as it deems reasonable: "Congress did not . . . affirmatively state what sorts of devices fall into the television broadcast receiver category, leaving that gap-filling task instead to the agency." Association of Maximum Service Telecasters v. FCC, 853 F.2d 973, 978 (D.C. Cir. 1988). Here, the conclusion that a set-top box is an "apparatus designed to receive television pictures" is not only reasonable but is, in fact, the most logical reading of the statutory language.

would safeguard the fulfillment of the FCC's mission to afford all Americans an opportunity to enjoy the full benefits of digital television.<sup>20</sup>

- II. CERTAIN FCC DETERMINATIONS ARE CRITICAL TO ALLOWING BROADCASTERS A GENUINE OPPORTUNITY TO AFFORD ALL CONSUMERS THE FULL BENEFITS OF ADVANCED TELEVISION
  - A. Viacom Supports The Emerging Consensus On Many Of The Issues Raised By The Transition To Digital Television
    - 1. Speedy Adoption Of The Grand Alliance/ATSC Standard Will Make It Possible For All U.S. Consumers To Enjoy A Full Array Of Digital Services

Viacom joins other commenters in urging that the FCC promptly adopt the highly flexible and innovative ATSC standard for digital television, including the

additional authority to require open standards in cable set-top boxes. See 47 U.S.C. § 544(b) (1995 supplement). Viacom also notes that Congress, in its deliberations over telecommunications legislation, has proposed to give the Commission even more authority, while working with industry standard-setting organizations, to assure commercial availability of multichannel video programming. H.R. 1555, 104th Cong., 1st Sess. §§ 202(1), 203 (1995).

<sup>&</sup>lt;sup>20</sup> As MSTV has explained, "Commission adoption of an open access safeguard will help ensure that the FCC's demonstrated commitment to the availability of ATV for all Americans will not be frustrated." MSTV Comments at 38.

HDTV and SDTV formats.<sup>21</sup> Although this measure alone cannot guarantee that consumers will enjoy ready access to the full array of digital TV program services available, adoption of the standard is the necessary first step in building a truly open digital TV system.

Commenters have praised the highly flexible ATSC Digital Television Standard as the most advanced broadcasting specification ever devised.<sup>22</sup> Once adopted, the Grand Alliance/ATSC standard will enable broadcasters to participate in the digital video age and development of the National Information Infrastructure -- and, even more, bring the world's best digital broadcast services to American consumers. Failure to adopt that standard, as various commenters have already explained, could put at risk the nation's preeminence in digital television technology or, at the very least, substantially delay the introduction of digital television while other standards are being developed and tested.<sup>23</sup> For this same reason, Viacom also agrees with other commenters that the FCC should require that all ATV receivers and set-top converter

<sup>&</sup>lt;sup>21</sup> See NPRM, 10 FCC Rcd. at 10,542-544; HDTV Grand Alliance Comments at 17-18; MSTV Comments at 10-11; 38-39 (urging adoption of ATSC standard for cable television systems); NAB Comments at 8 (urging adoption of ATSC standard for cable television systems); Hitachi Comments at 2; Comments of Thomson Consumer Electronics, MM Docket No. 87-268, at 3 (filed Nov. 20, 1995) ("Thomson Comments").

<sup>&</sup>lt;sup>22</sup> See, e.g., NAB Comments at 8-10; Thomson Comments at 3; MSTV Comments at 10-11.

<sup>&</sup>lt;sup>23</sup> See, e.g., MSTV Comments at 10-11; NAB Comments at 8-10.

boxes built or sold for use in the United States be constructed in accordance with the standard.

2. The Record Demonstrates That Reserving Initial Eligibility For Existing Broadcasters Will Promote The Speediest, Most Universal Delivery Of Digital Broadcasting Services To The American Public

The record in this proceeding strongly supports the agency's tentative conclusion that prompt and efficient implementation of over-the-air digital television requires limiting initial eligibility for ATV licenses to existing broadcasters.<sup>24</sup> Certainly such an initial licensing limitation would smooth the transition to ATV for many reasons, not the least of which is the virtual absence of available channel allotments beyond those necessary to allow existing local broadcasters to make the transition to digital service. As various commenters have noted, existing broadcasters are in the best position to construct and operate ATV facilities in a relatively quick fashion and thus ensure the continuation of free television throughout the transition.<sup>25</sup>

<sup>&</sup>lt;sup>24</sup> NPRM, 10 FCC Rcd. at 10,545.

See, e.g., APTS/PBS Comments at 13-14; EIA & ATV Committee Comments at 19-20; INTV Comments at 7; MSTV Comments at 7-9; Comments of Christian Communications of Chicagoland, Inc., MM Docket No. 87-268, at 3 (filed November 20, 1995) ("Chicagoland Comments"); Comments of New World Television, Inc., MM Docket No. 87-268, at 5-6 (filed Nov. 20, 1995) ("New World Television Comments"); Comments of Pacific FM, Inc., MM Docket No. 87-268 at 2 (filed Nov. 20, 1995) ("Pacific FM Comments"); HDTV Grand Alliance Comments at 7; EIA & ATV Committee Comments at 19-20.